AIRS Mission Support from GES DISC

Goddard Earth Sciences Data and Information Services Center (GES-DISC)

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Sounder Science Team Meeting
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Status Quo

- GES DISC Web Support for AIRS (Table)
  - Status on AIRS L1C, CO_2
  - Status on AIRS V5, V6.
  - Status on AIRS Near Real Time (NRT).
- Metrics for V5/V6 usage/support
- Challenges to user community
  - Multiple Versions
  - L3 temporal information
  - Multiple Browse Services
- Plans for New Services and Collaboration

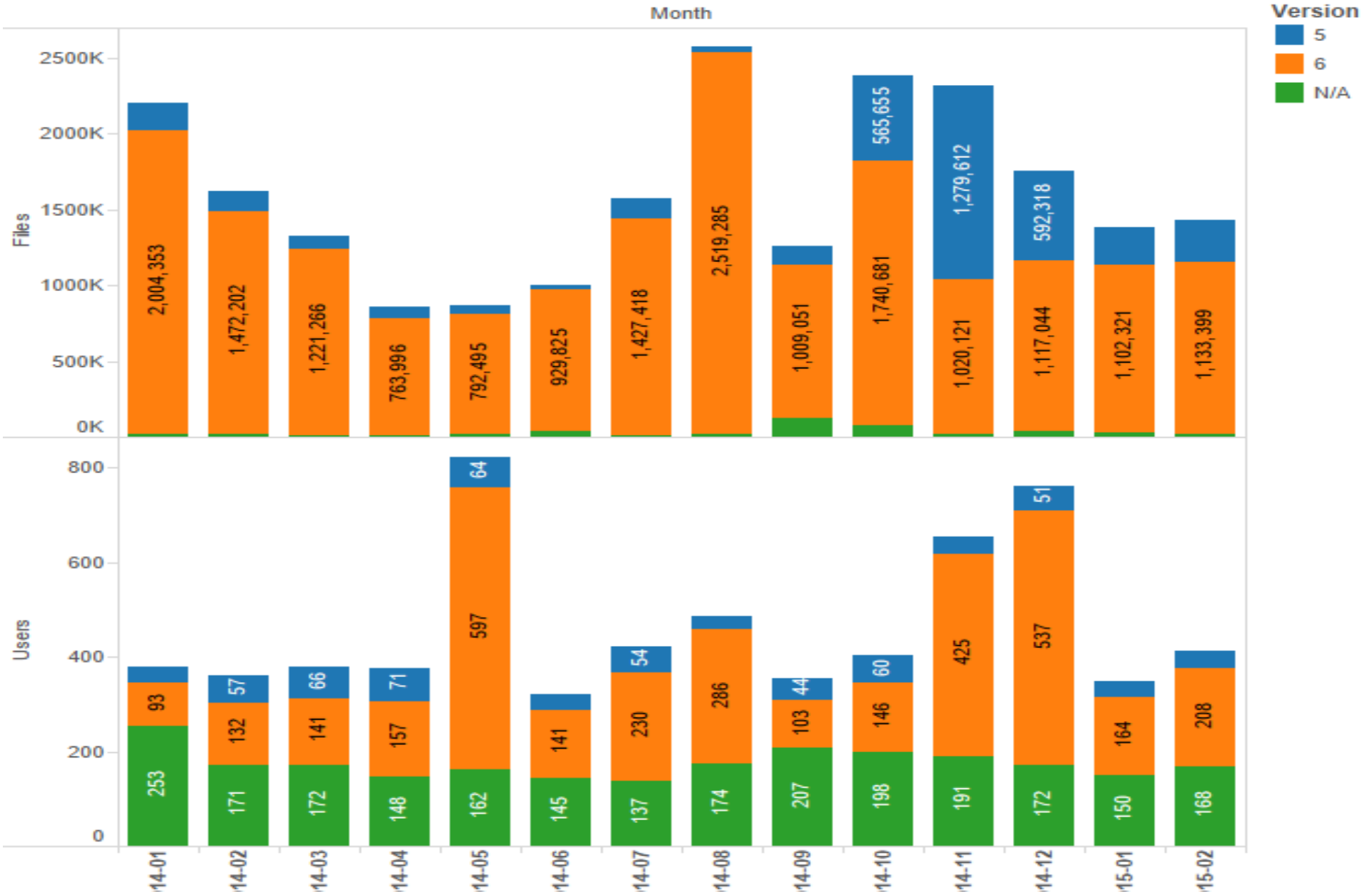
GES DISC Web Support for AIRS

		GCMD	ECHO	GES DISC Web search	Subsetting	OPeNDAP	netCDF	G3*	G4*	WCS/ WMS
V5	Level 1	✔	✔	✔	✔	✔	✔			
	Level 2	✔	✔	✔	✔	✔	✔			
	Level 3	✔	✔	✔	✔	✔	✔	✔		✔
	CO_2	✔	✔	✔	✔	✔	✔	✔	✔	✔
	NRT (L1b)	✔	✔		✔	✔	✔			✔
V6	Level 1c	✔	✔	✔	✔	✔	✔			
	Level 2	✔	✔	✔	✔	✔	✔		✔	
	Level 3	✔	✔	✔	✔	✔	✔		✔	✔
	NRT (L2)	✔	✔		✔	✔	✔			✔

Note: G3: Old Giovanni 3. G4*: Current Giovanni 4 ✔:in Progress

Metrics for Level 2 V5/V6 Usage

AIRS L2 V5/V6



Metrics for Level 3 V5/V6 Usage

Challenges to users

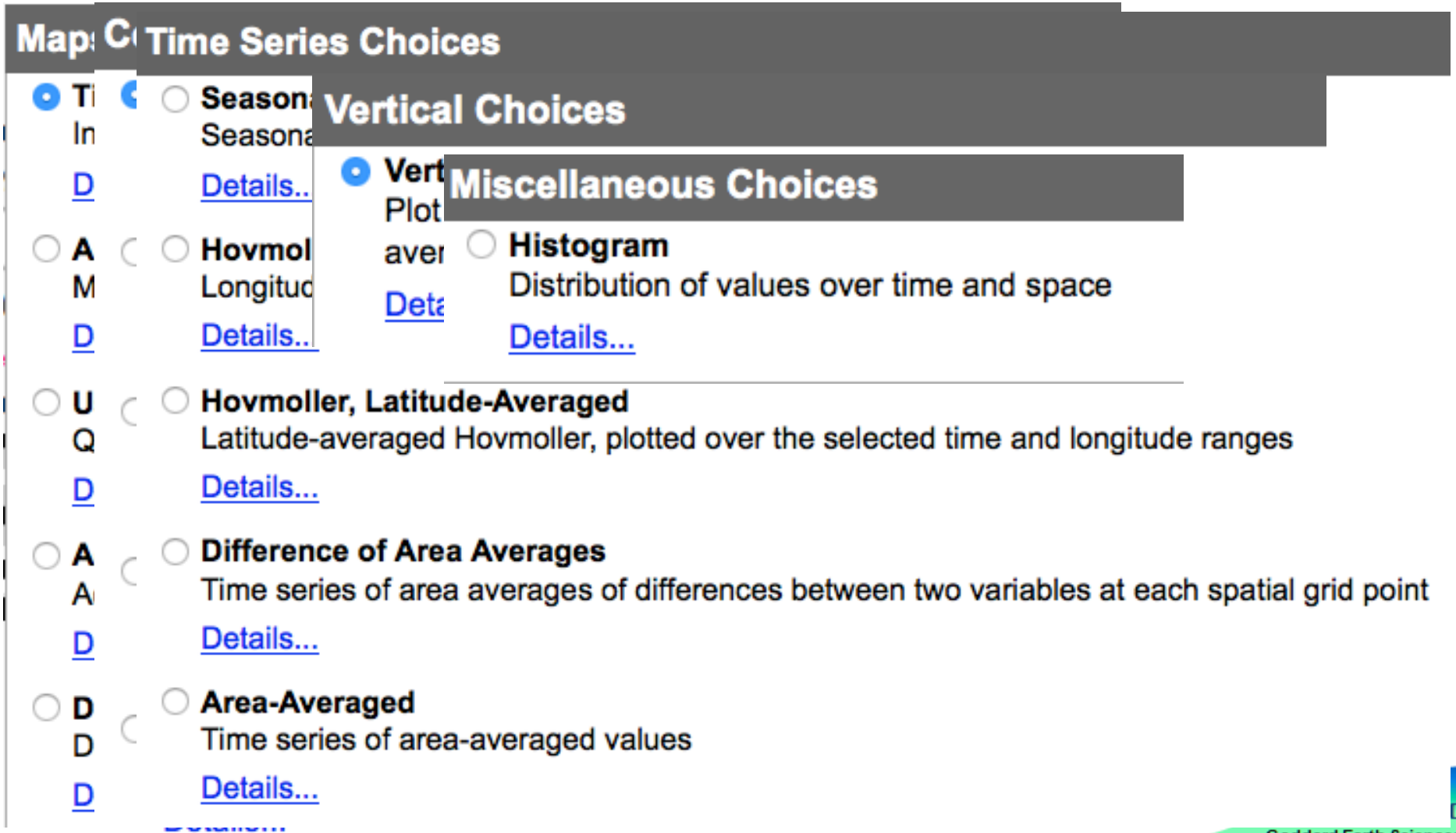
- Multiple Versions
  - V5 and V6 services
  - V6 products: STD vs IR-only
  - V6 L1C usability
  - Inconsistent V5 CO_2 series
- AIRS L3
  - Begin Time for Ascending/Descending Grids
  - Mean Time at a grid cell
  - L3 usability (TqJ and Regular) → GES DISC "Lite Products"
- Multiple browsing services
  - GES DISC NRT ImageViewer
  - Provides images to Global Imagery Browse Services (GIBS)

Challenges to users

- Multiple Versions
  - V5 and V6 services
  - V6 products: STD vs IR-only
  - Inconsistent V5 CO_2 series
  - V6 L1C usability

Provides V5 and V6 services - Giovanni

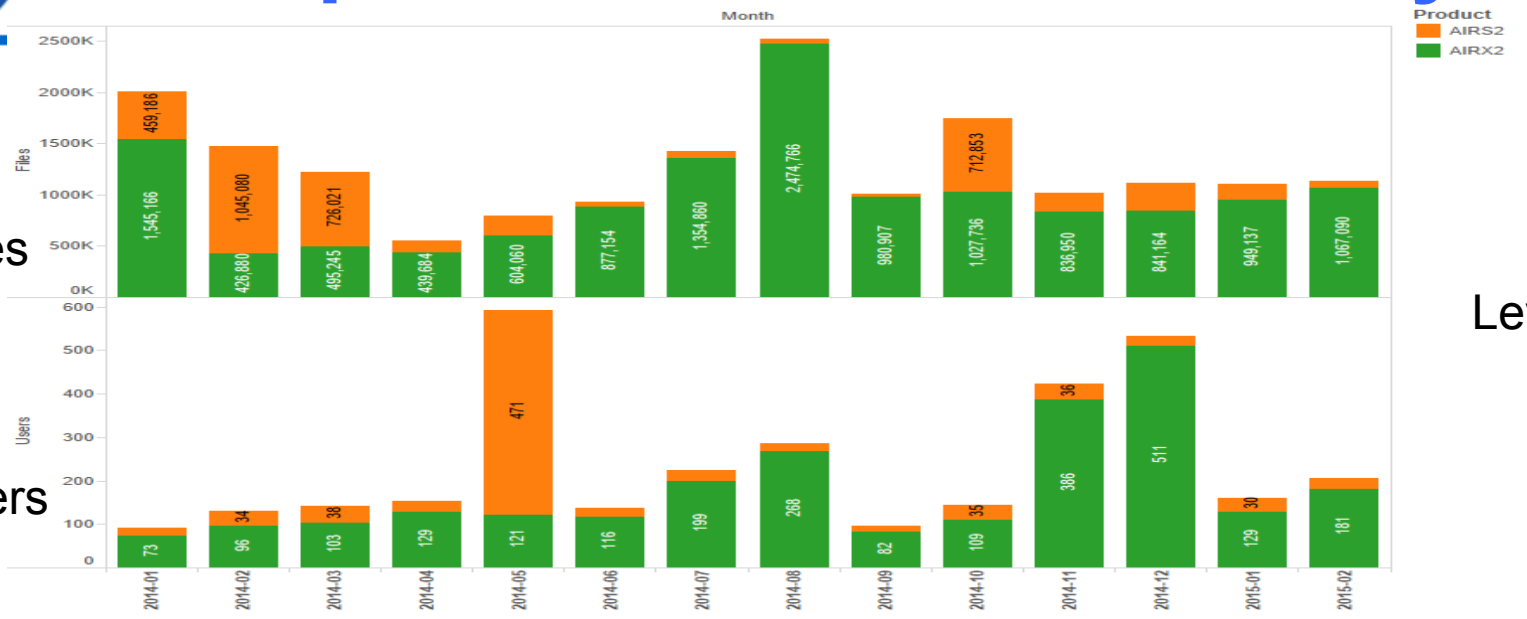
http://giovanni.gsfc.nasa.gov/giovanni/#service=INTERACTIVE_MAP&starttime=&endtime=&bbox=-180,-90,180,90&variableFacets=dataProductPlatformInstrument%3AAIRS%3B



V6 products: STD vs IR-only

Files

Users

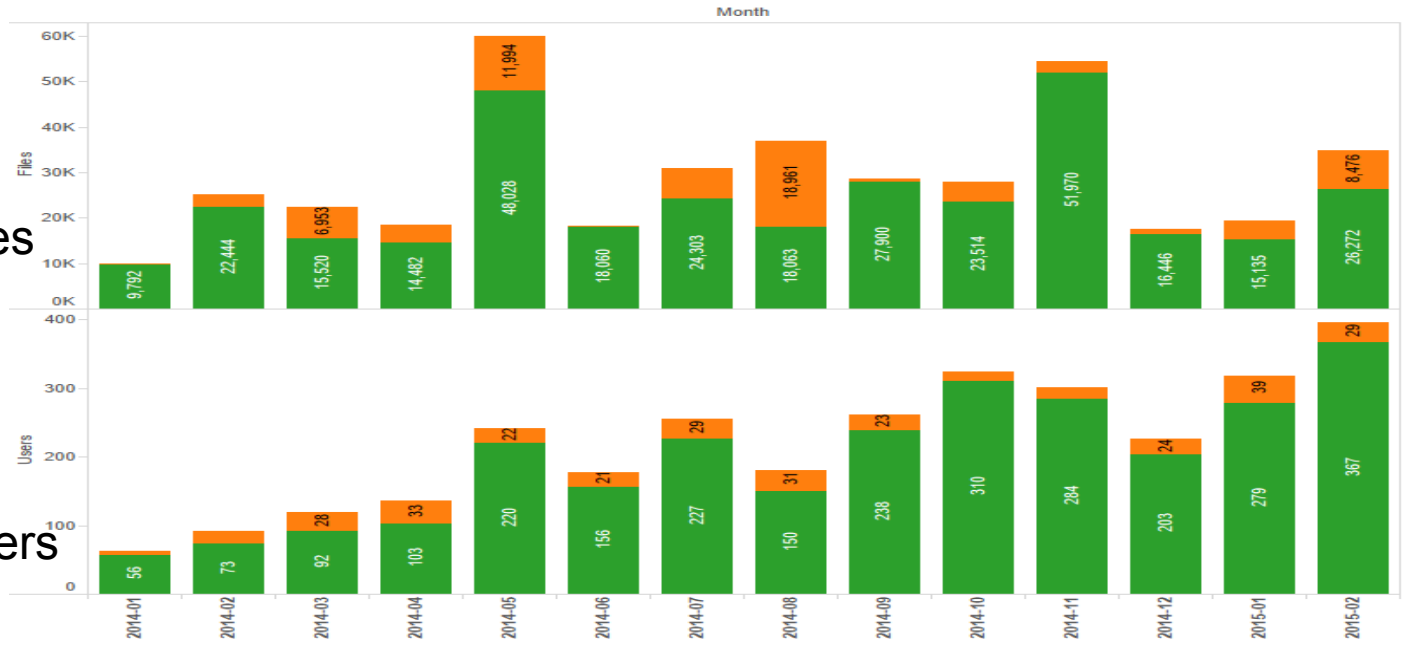


Sum of Files and sum of Users for each Month. Color shows details about Product. The view is filtered on Product, which keeps AIRS2 and AIRX2.

Level 2

Files

Users



Sum of Files and sum of Users for each Month. Color shows details about Product. The view is filtered on Product, which keeps AIRS3 and AIRX3.

Level 3

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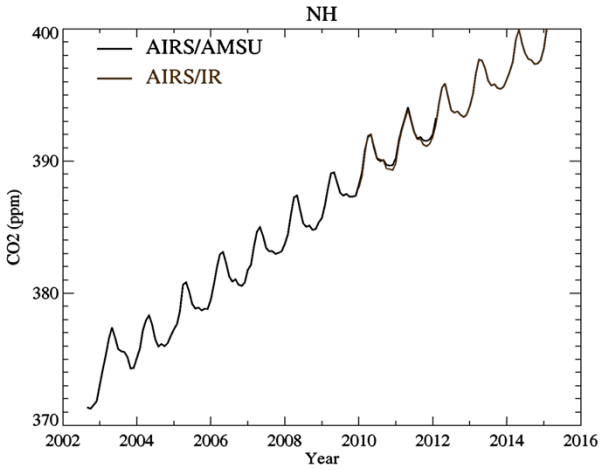
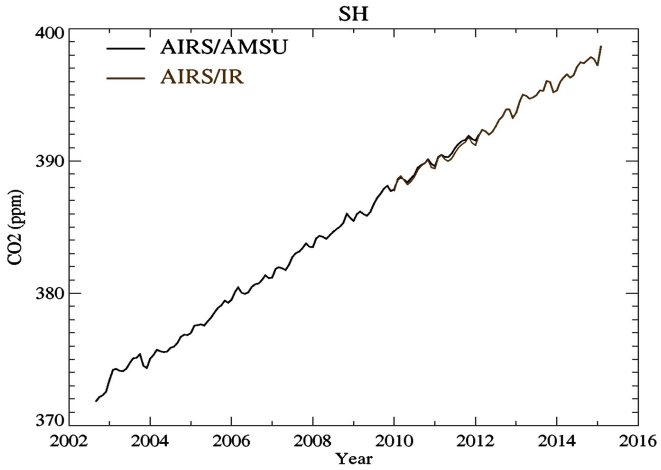
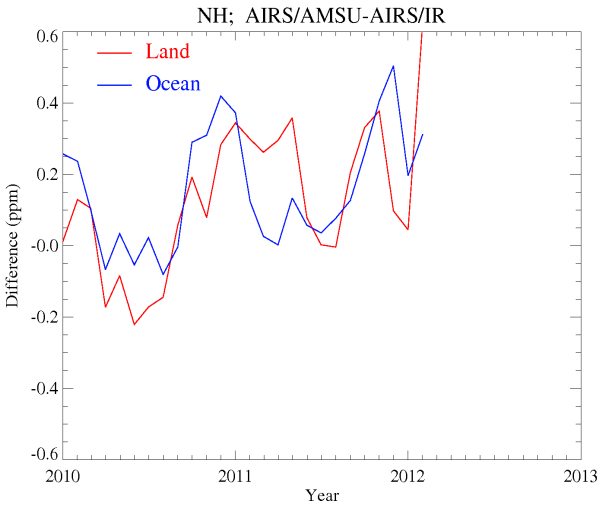
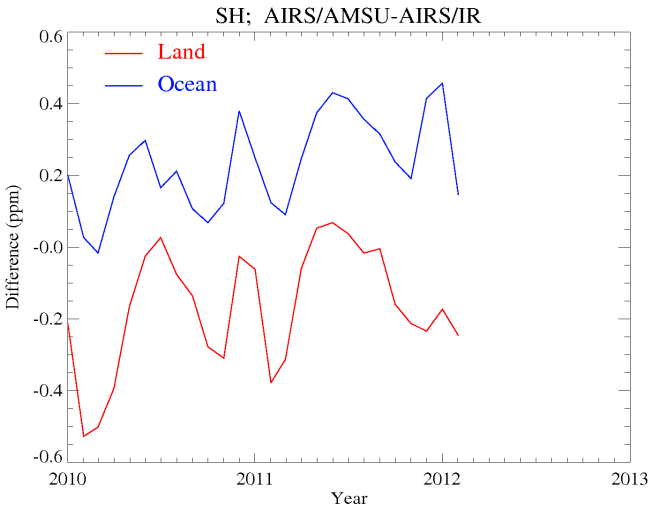
Inconsistent V5 CO_2 Collections

- Differences btn AIRS/AMSU vs AIRS/IR are very small. We should have one consistent series instead.









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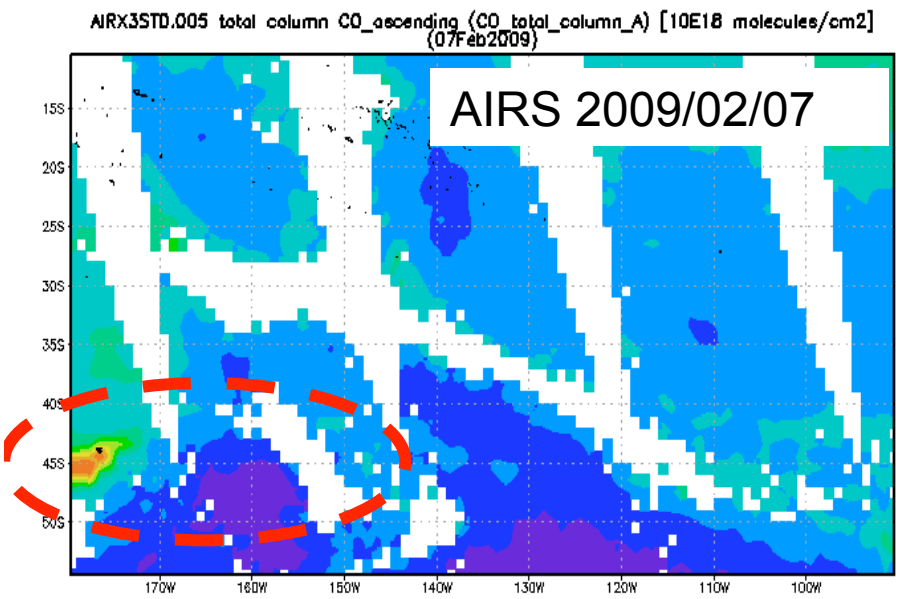
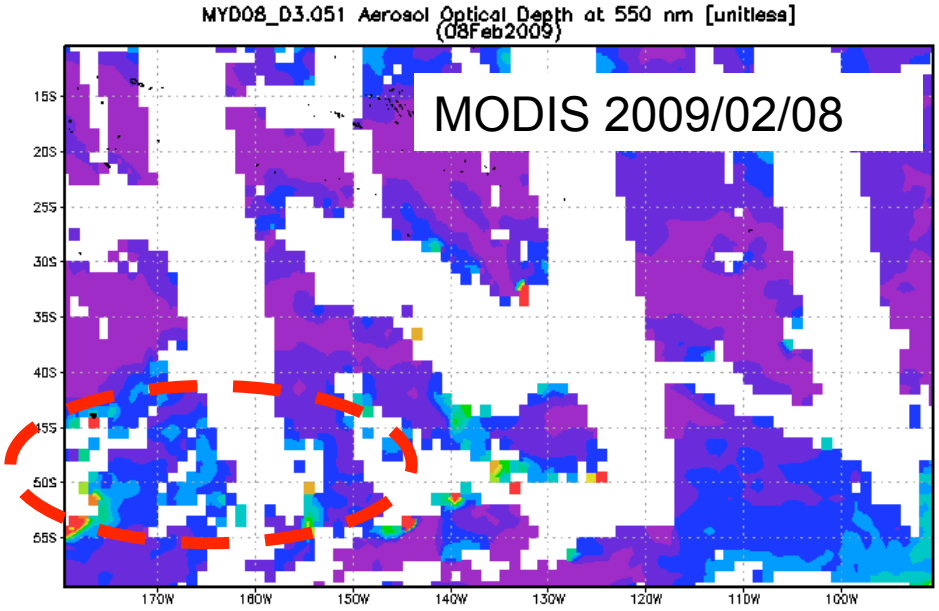
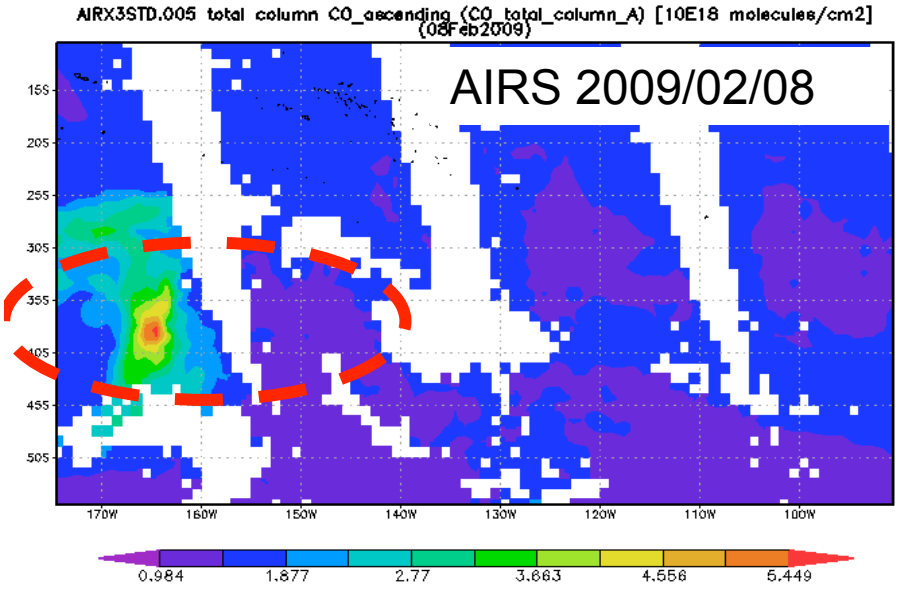
Challenges to users

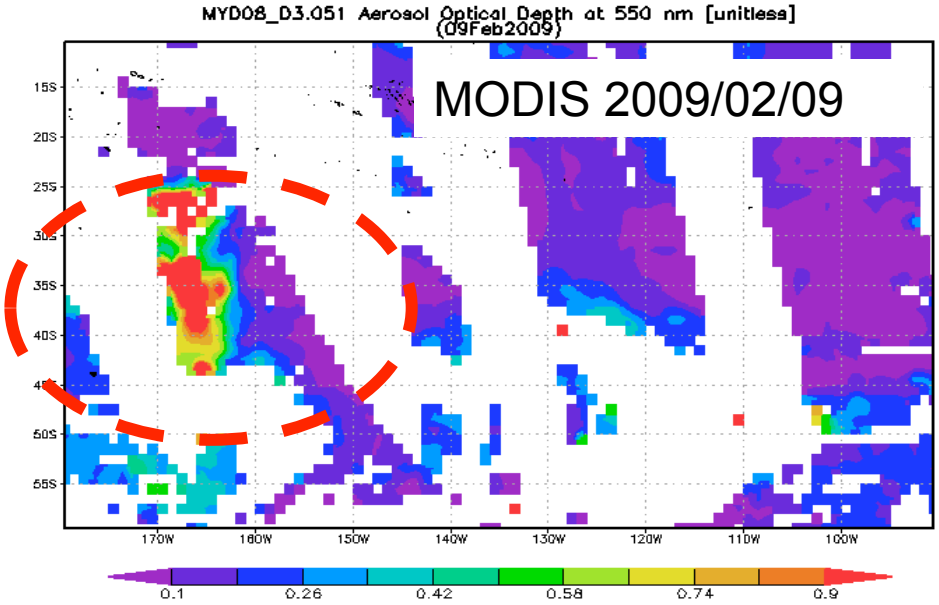
- AIRS L3
  - Begin Time for Ascending/ Descending Grids
  - Mean Time at a grid cell
  - TqJoint vs. STD usability

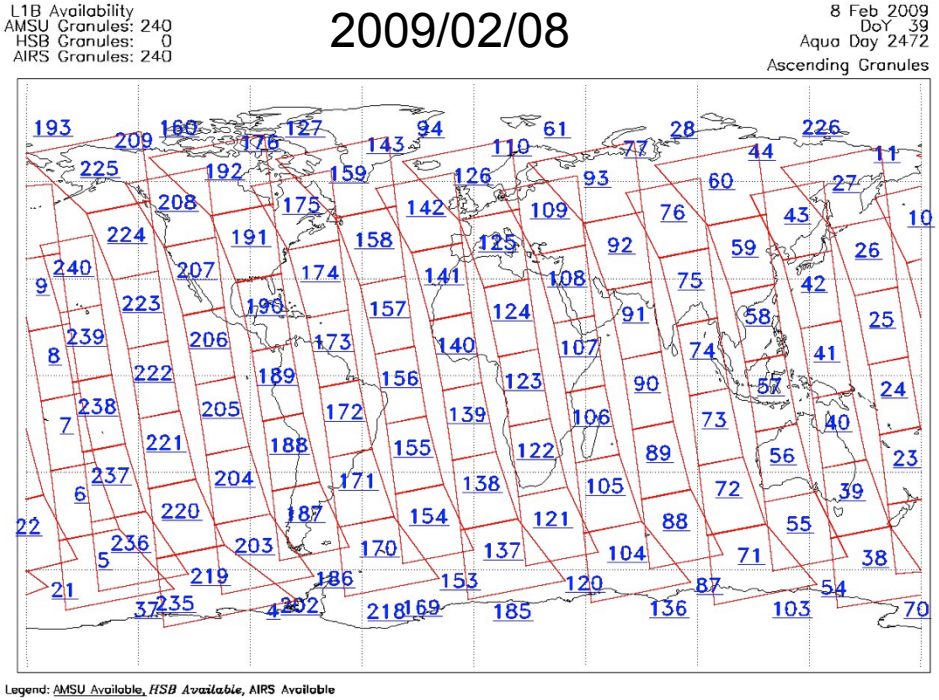
AIRS L3 Begin Time for Ascending/Descending Grids

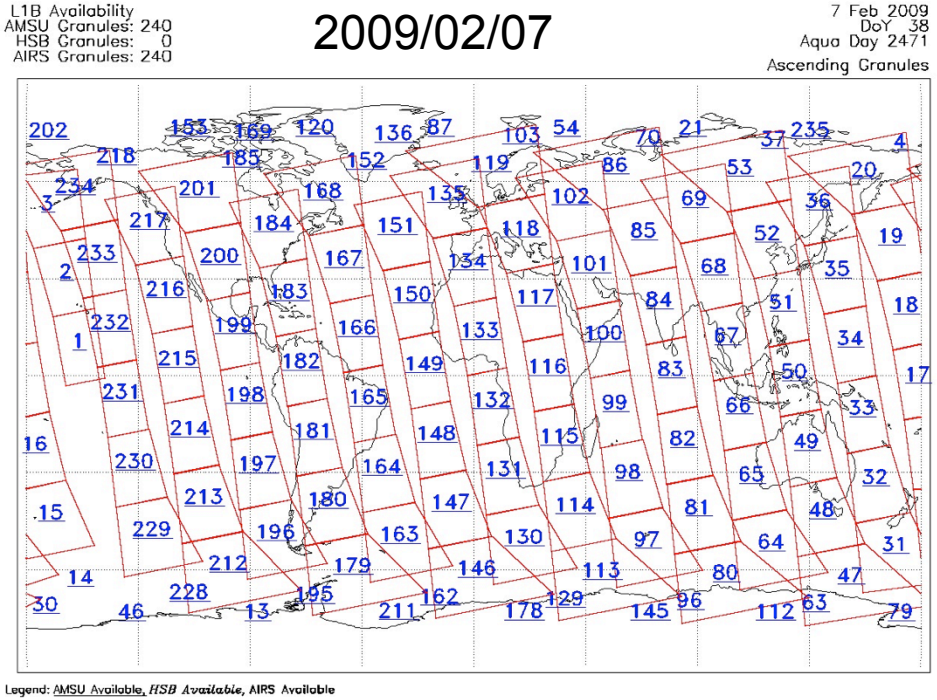












Begin Time for Ascending/ Descending Grids

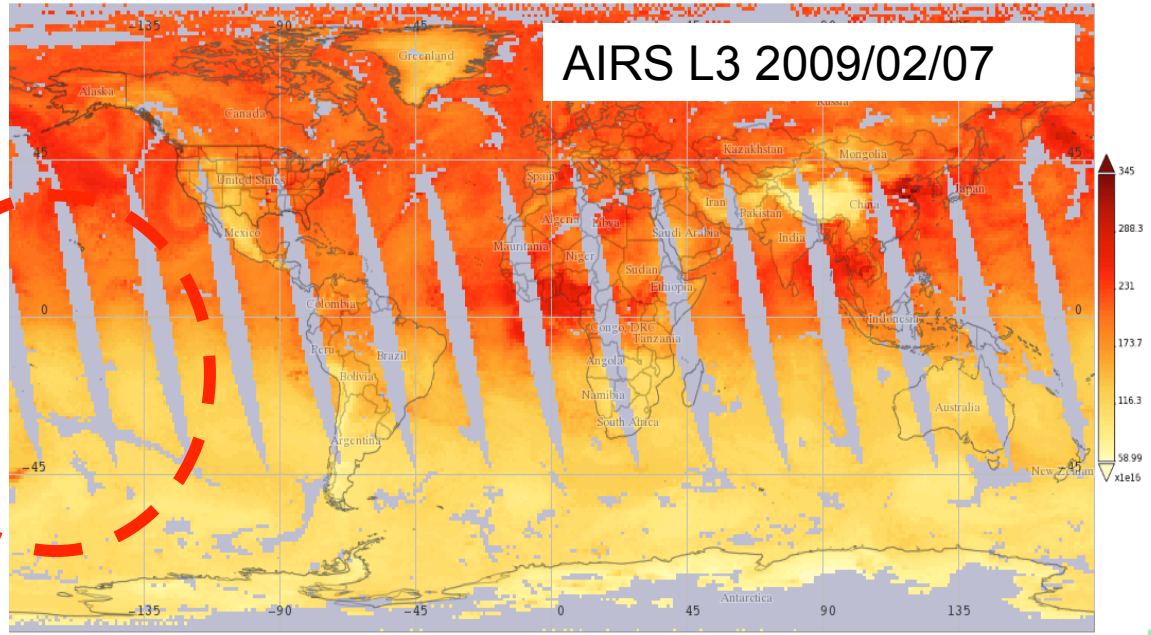


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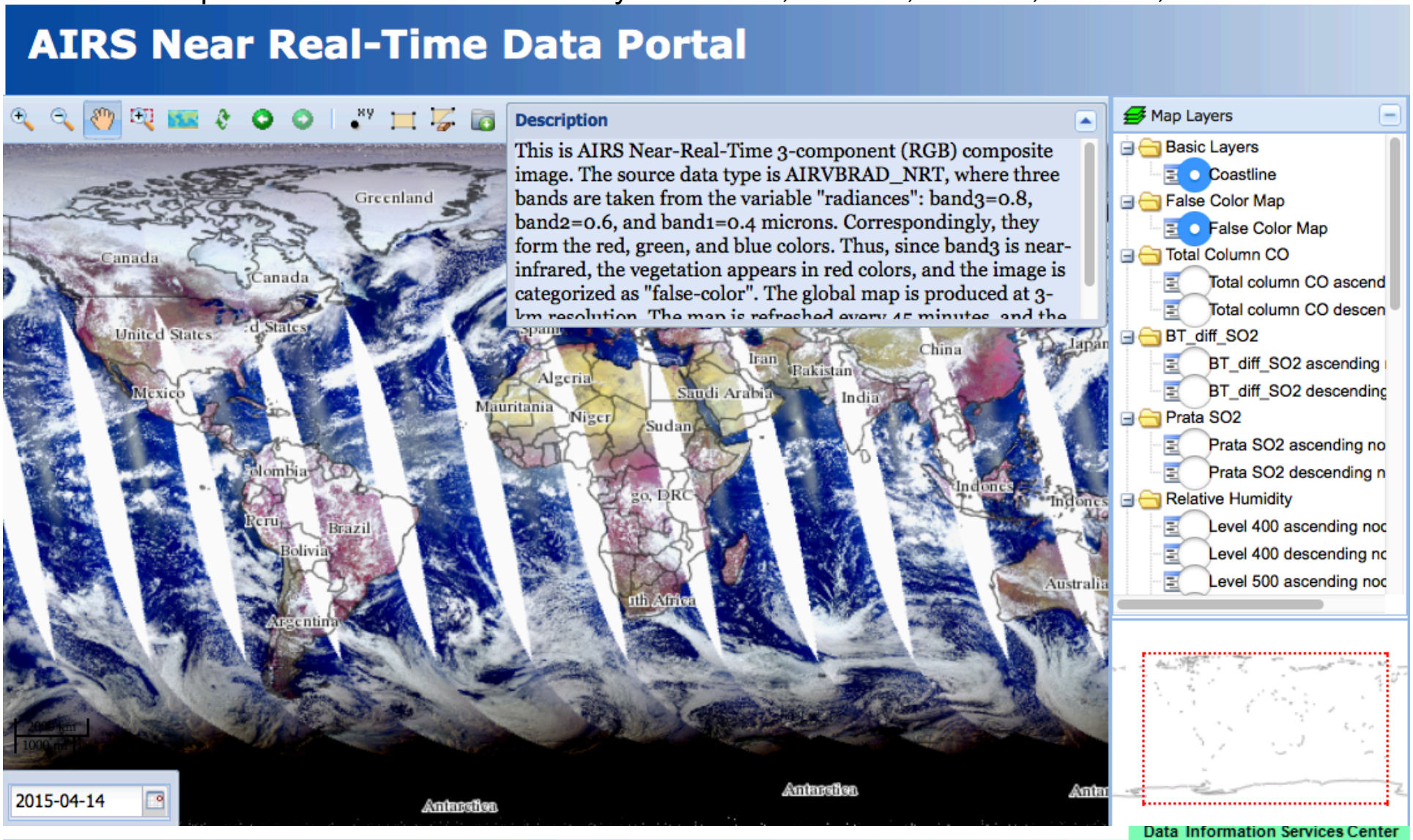
Image browse service

1. VIS radiances (false color map) 2. CO, Bt_diff_SO2, Prata_SO2
3. Dust score 3. Precipitation
4. Temperature and Relative Humidity at 850hPa, 700hPa, 600hPa, 500hPa, and 400hPa



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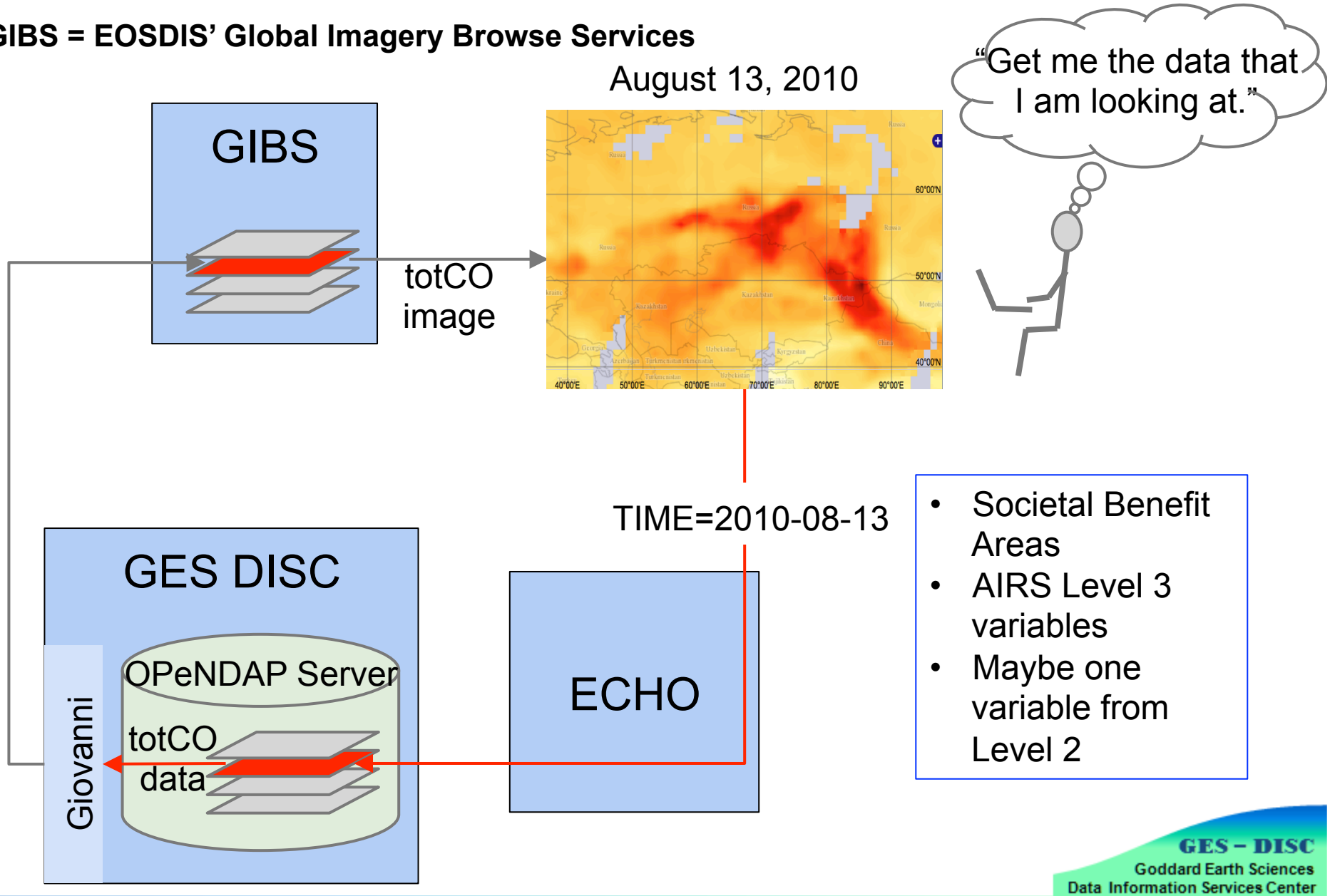
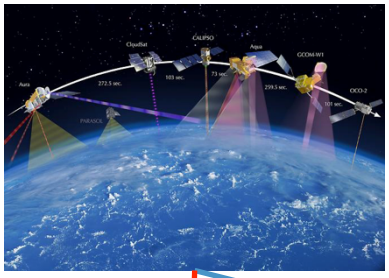
GES DISC Big Earth Data Initiative (BEDI)

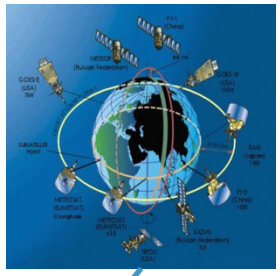
GIBS = EOSDIS' Global Imagery Browse Services

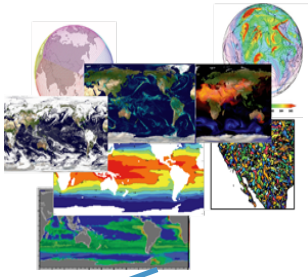


- Societal Benefit Areas
- AIRS Level 3 variables
- Maybe one variable from Level 2

GES DISC Developing Capability



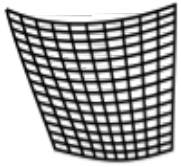




SWATH

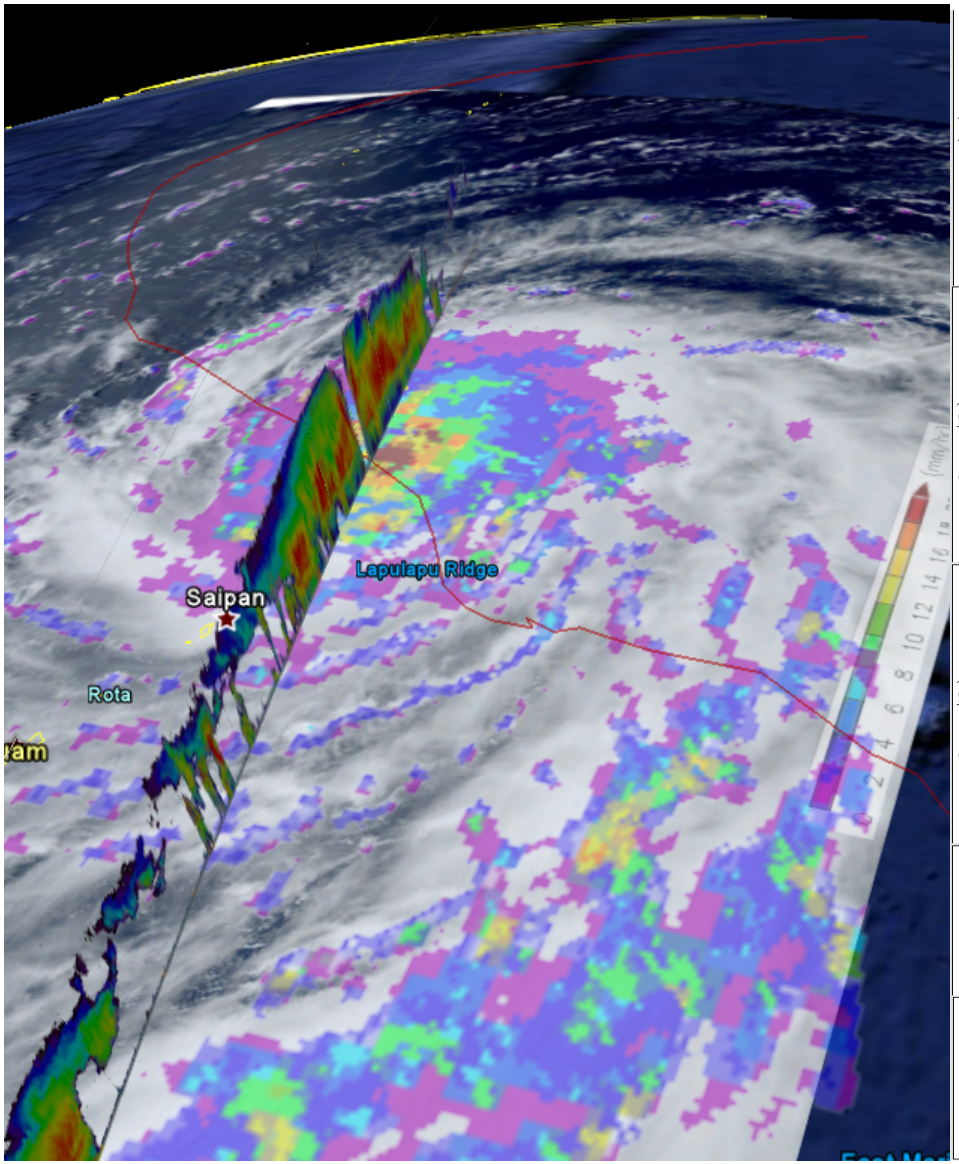
GRID

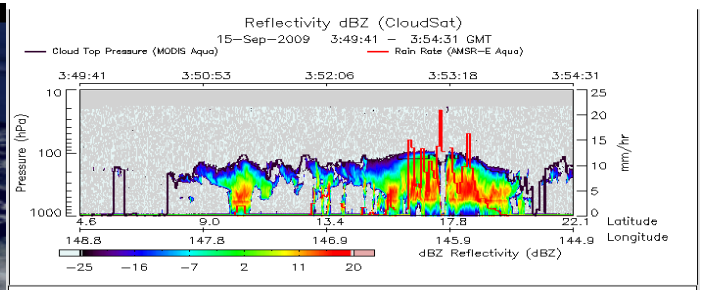
POINT

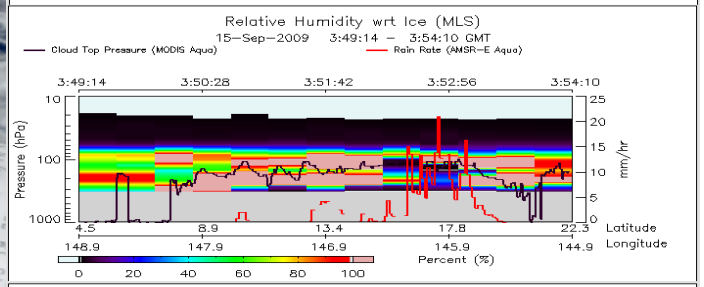


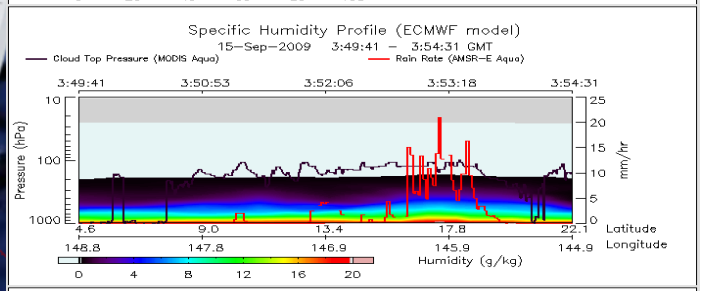
- Multiple measurements
- Different shapes
- Tools developed for the user community

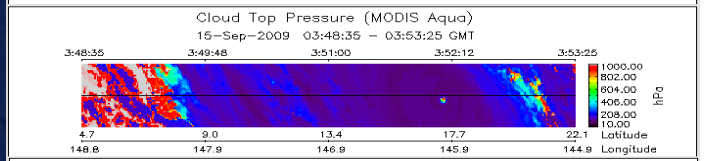
GES DISC A-Train Data Depot

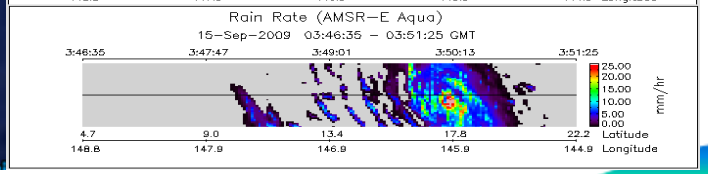




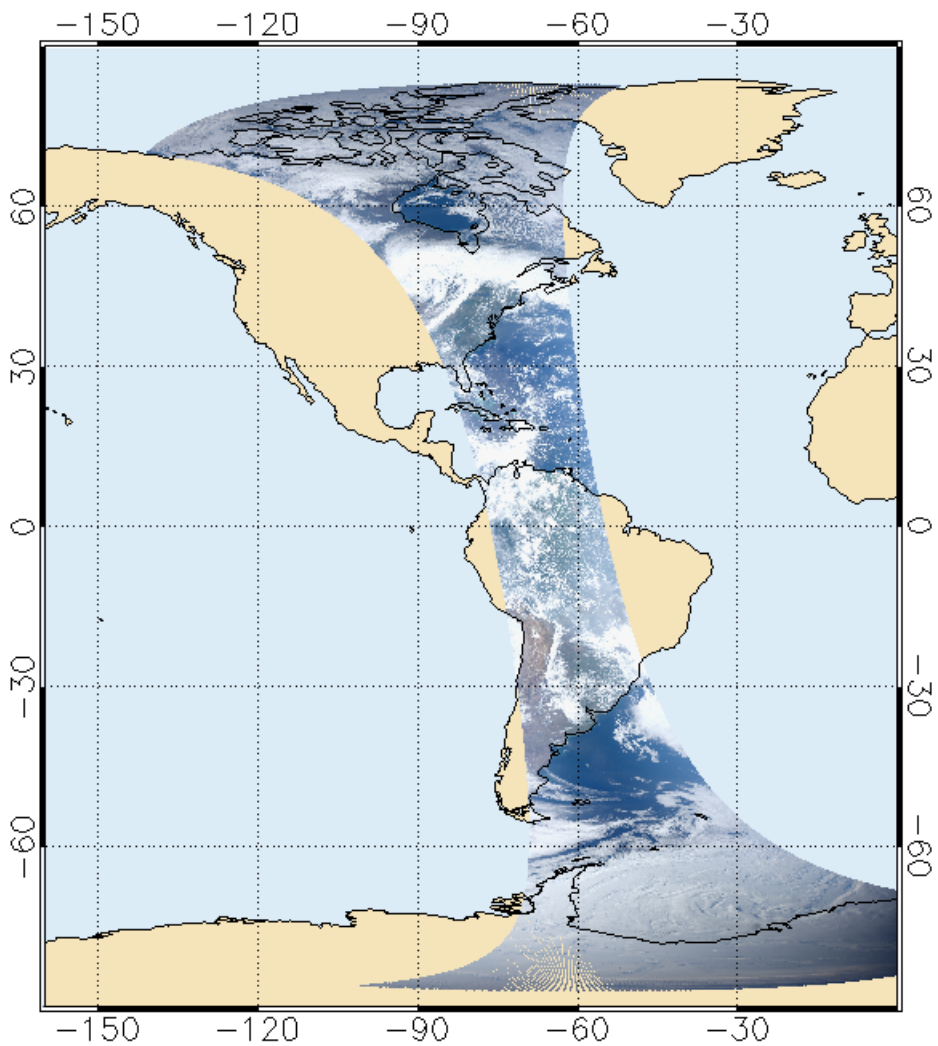




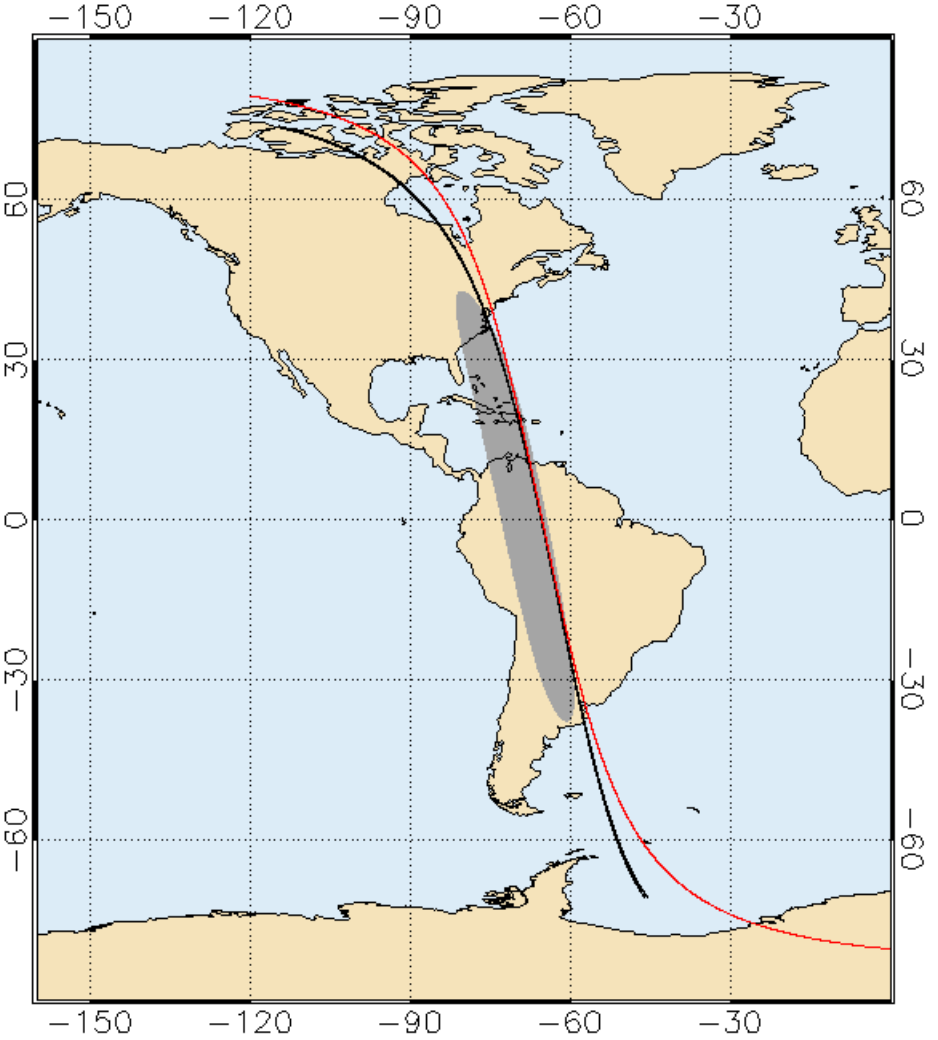




Example: Co-locate MODIS/OCO-2



MODIS/Aqua,
2010-09-24



MODIS/Aqua glint (grey ellipse), OCO glint swath (black thick line), MODIS/Aqua nadir (red line), 2010-09-24

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Thank you.

Question? Jennifer.C.Wei@nasa.gov